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The Changing Administration and Role of Forestry in the Economy of Vietnam

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This paper reviews the changing forestry policies in Vietnam from the 1980s to the present. The role of forestry in the economy, developments in forest industries, government programs to encourage plantation establishment, and trade progress are examined. It is concluded that while there is a shortage of timber, log prices to growers are low due to high markups along the supply chain. Government programs such as the Five Million Hectares forestry program will lead to major supply increases in the future, but improvements in timber marketing will remain critical. While forestry exports from Vietnam have increased in the last decade, this has been based mainly on traditional handicrafts. Small enterprise size and lack of advanced technology limit export competitiveness.

Keywords: five million hectare program, protection and production forests, mountainous area, forestry timber supply chain

INTRODUCTION

Forestry has traditionally been an important industry in Vietnam, and a mainstay to the livelihood of some rural communities. A number of government programs have been introduced to promote forestry. These may be viewed against a backdrop of national economic reform.

The forest area of Vietnam has declined sharply in past half century due to three main and inter-related reasons, namely over-exploitation for timber production, the nomadic farming and living situation, and poverty leading to fuelwood extraction. The decrease in forest resources has seriously affected the water quality and supply, and exacerbated flooding and soil erosion. The decrease in forest area has led to reduction in biodiversity including species richness (Dang Kim Son *et al*. 2002, pp. 12-13). A variety of animals and plants found naturally in forested ecosystems of Vietnam are now facing extinction.

There is a lack of detailed information about forestry in Vietnam, especially regarding timber consumption. Useful information is available on timber production from surveys undertaken by the Information Centre for Agricultural and Rural Development (ICARD) in 2000 and 2001 in Phu Tho Province and Dai Tu District of Thai Nguyen Province.

This paper examines changes in forest industry structure and forestry policies in Vietnam, particularly over the last 25 years. The next section identifies trends in the national economy, and the contribution played by forestry. This is followed by a review of national forestry policies and support programs. The profitability of forestry relative to other land uses is examined. The various stakeholders in the timber supply chain are then discussed. Finally, comments are made on progress and prospects for timber exports from Vietnam.

GENERAL ECONOMIC TRENDS AND THE ROLE OF FORESTRY IN THE VIETNAMESE ECONOMY

In the reform period from 1989 to 2001, Vietnam had high GDP growth, of about 7.1% per year. The role of agriculture was especially stressed for employment purposes. As indicated in Table 1, for most of this period the growth rate of agriculture remained stable at about 3-6%, while the growth rate of industry was somewhat higher, of about 8-14%. Agriculture has made a substantial contribution to other sectors through supplying essential goods for domestic production and consumption and through generating revenue from exports. Having a high and stable growth rate, the economic structure of Vietnam gradually shifted towards industrialisation, which is expressed via the reduction of the agriculture sector contribution to GDP from 33.1% 1989 to 23.6% 2001 (GSO 2003).

Table 1. Growth rates of industrial and agricultural sector GDP and rural population share in Vietnam, 1990-2001

Year	Annual growth rate in industrial GDP (%)	Annual growth rate in agricultural GDP (%)	Fraction of population living in rural areas (%)
1990	2.27	1.00	80.5
1991	7.71	2.18	80.3
1992	12.79	6.88	80.1
1993	12.62	3.28	80.0
1994	13.39	3.37	78.9
1995	13.60	4.80	80.0
1996	14.46	4.40	78.9
1997	12.62	4.33	77.3
1998	8.33	3.53	76.9
1999	7.68	5.23	76.4
2000	10.07	4.64	75.8
2001	10.32	2.79	75.2

Source: GSO (2003).

During the reform period, the poverty rate progressively decreased. The proportion of the population who had expenditure per capita below the poverty line fell from 70% in the mid-80s to 58% in 1993 and to 37% in 1998 (World Bank 2000). Vietnam is one of the few countries that has succeeded in the twin objectives of increasing the growth rate and reducing poverty. Few if any other countries gained such poverty reduction in such a short time (World Bank 2000).

Despite these achievements, Vietnam is facing to two great difficulties. One is the increasing income gap between the well-off and the poor. The population is large – 78.7 M in 2001, ranked twentieth in the world – and the population density is one of the highest in the world (255 people/km^2). The rate of population increase has been high, averaging 2.1% per year in the 1980s and 1.7% in 1990s. Over 75% of the population live in rural areas (Table 1), and about three-quarters of the rural labour force work in the agriculture and forestry sector, of which about 25 M people rely on non-timber forest products for their livelihood (CIEM 1999). About 1.3 M people reach working age in rural areas every year, placing great pressure on job creation. Development of the industrial sector focuses mainly on low job-creatable fields, hence this sector is not strong enough to attract surplus workers from rural areas (CIEM 1999, p. 27). As a result, the ratio of urban to rural labour force has only declined slowly. The slow movement of workers from rural to urban areas and declining contribution of agriculture to GDP have led to a widening of the income gap between urban and rural workers, and 90% of the poor now live in rural areas (Bhargava, cited in MARD and FAO 1999, p. 160).

The second difficulty is that economic restructuring in the agricultural sector can only proceed slowly. During the period 1990-2001, cropping activities made the greatest contribution to GDP, fluctuating between 64% and 68% of total agroforestry and aquaculture value. Livestock and aquaculture are also important sectors, and the relative contribution of aquaculture is gradually increasing. The contribution of forestry has decreased over this period. For example, the forestry share of GDP fell from 3% in 1990 to 1.4% in 1995, and the value of exports from forestry fell from 5% of total export value in 1990 to less than 3% in 1995 (ICD of MARD 2001, p. 4). The average annual growth rate of forestry activities (1.59%) has been lower than other agricultural activities[1], due mainly to very slow policy reform in the forestry sector. Currently, forestry contributes only about 4% of total agriculture value, and 1.8% of GDP, and provides jobs for 3.9% of the labour force (Bhargava, cited in MARD and FAO 1999, p. 142). Most of the poor in rural areas derive their living from forestry. According to ICARD (2001), 34% of households in the northern highlands and more than 60% in the central plateau belong to the poor and the very poor socio-economic groups, compared with 27% nationally. Hence, the achievement of poverty reduction has no sign of stability because the majority of rural people have income little above the poverty line, and only a small economic upheaval is enough to push their living standard back to the poverty level (World Bank 2000, p. 4).

[1] These data do not include the indirect contribution of forestry to other production activities nor the value of ecosystem services of forests.

TRENDS IN TIMBER PRODUCTION

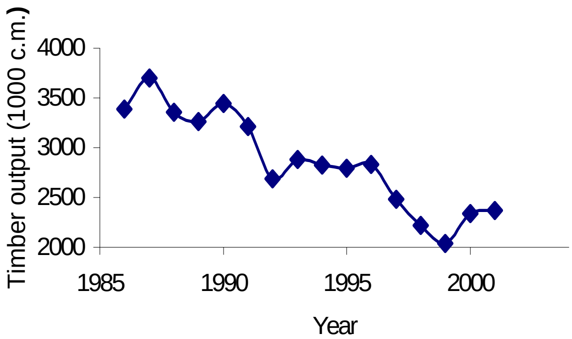
In 1943, the proportion of forest cover was about 43% of the national land area, or about 14 M ha. By 1973, the proportion had declined to 29% (9.5 M ha), and by 1981 to 23% (7.8 M ha). Forest land is divided into three categories, namely production forest, protected forest and special-use forest. Production forests are managed for wood exploitation. Protected forest are managed to protect soil and water quality, to sequester carbon and to achieve other environmental benefits. Special-use forests are designed to protect flora and fauna as well as for ecosystem restoration. The recent trend in area of natural and plantation forest cover is indicated in Table 2. Total production forest area has stabilised, due to an increasing proportion of plantations, from near zero in 1976 to about 20% in 2001.

Table 2. Area of natural and plantation forest in Vietnam, 1976-2001 (M ha)

Forest type	Year					
	1976	1980	1985	1990	1995	2001
Natural forest	11.077	10.186	9.308	8.431	8.253	8.790
Plantation forest	0.093	0.422	0.584	0.745	1.048	2.610
Total area	11.169	10.608	9.892	9.176	9.302	11.400

Source: GSO (2002).

Figure 1 indicates the volume of timber harvested per year from natural and plantation forests over the period 1990 to 2001. There has been a rapid decline, but with flattening out over the last few years to about 2 M m^3/year. At the same time, the demand for timber has continued to increase, placing great pressure on wood imports and sanctioned timber harvesting operations, and encouraging illegal logging of natural forest. Thanks to the policy of Land and Forest Assignment from the beginning of the 1990s, the area under plantations has increased rapidly, reducing the pressure on natural forest exploitation and increasing plantation wood supply since 2000. In the future, timber harvested from plantation forests will be more important to satisfy wood demand. It is estimated that in 2005 sawn wood demand will be 9.35 M m^3 and firewood demand 14.4 M m^3, and in 2010 demand will be 13.5 M m^3 and 10 M m^3 respectively.



Source. GSO (2003).

Figure 1. Volume of timber harvested from natural and plantation forests in Vietnam, 1986-2001

NATIONAL FOREST POLICY AND SUPPORT PROGRAMS

From the 1960s to 1980s, Vietnam harvested about 2 M m^3 of wood per year for civil and industrial purposes, excluding firewood, rattan and bamboo. As the forest area decreased rapidly in the period from 1985 to 1990, Vietnam reduced the harvest quantity to 1 M m^3 per year. However, the forest area showed no sign of stabilisation. Being aware of the importance of natural forest, the government of Vietnam implemented a range of policies to advance the role of forestry, reduce exploitation, promote planting and restore natural forests. These include:

- the *Law of Forest Protection and Development 1991*;
- the Land and Forest Assignment policies, from about 1990;
- seed and rice assistance;
- new trade policies to control exports introduced in 1993 and 1997;
- the Reforestation Barren Hill Program during the period of 1993-1998; and
- the Five Million Hectare Program (5MH) from 1998 up to the present.

Law of Forestry Protection and Development

The *Law of Forestry Protection and Development 1991* stipulates that the state unifies the management of forest and forestland. Under this law, the State:

- allocates forestland for organisations and individuals to protect, to develop and to utilise in the long-term under the State plans;
- protects the legal benefits of forest owners; and
- encourages organisations and individuals to invest their labour, materials and capital, and to apply science and technology advancements, in forest planting and protection, to exploit and process forestry products in the direction of combining agro-forestry-fishery development and processing industry.

The identification of forests types (protection, production and special use) and changes in forest use are decided by the State.

The Land and Forest Assignment Policies

Special usage and protection forests are often managed by the government via the Special Usage Forest Management Boards (established from National Park Management Boards or Natural Conservation Area Management Boards or Cultural-Historical-Environmental Area Management Boards, depending on the characteristics of the Special Usage Forest) and via the Protection Forest Management Boards if the protection forest has an area or more than 5000 ha. Protection forests smaller than 5000 ha are allocated to other organisations, households and individuals to manage, protect and plant (Decision 08/2001 QD-TTg).

Some special usage forests may have households living within them, if the government has not been able to provide allowance for them to settle in another place. Special Forest Management Boards may contract with these households and allocate forest land to them for their use in agricultural, forestry or fishery activities. The Boards may also contract with these households to protect and plant the forest if ecological recovery is necessary for the forest. Likewise, Protection Forest

Management Boards may contract with organisations, households or individuals to manage, protect and plant forests.

Production forests are usually allocated to forestry state farms and to households to produce wood. The Chairman of Peoples Committee at district level makes decisions on allocation of production forests to households to use as forest gardens or for agroforestry production. Foreign organisations and individuals or Vietnamese living overseas can rent production forest land to develop forestry and conduct business on the forest, but need the approval from the Chairman of Minister Board (now the Prime Minister).

Protection forests and special usage forests may also be rented out, but this rarely occurs. In the case of protection forests, this is limited to forests at the lower end of watersheds, in safety regions. In the case of special usage, it is limited to forests for ecological tourism and landscape business. For these forests, rental is not restricted to Vietnamese citizens; foreign organisations and individuals are also allowed to rent the forests (Decision 02 QD-BNN 5/1/1999).

Seed and Rice Assistance

At the end of the 1980s and the beginning of the 1990s, under the national forestry support program, seed assistance and rice were granted to many households in Dai Tu District of Thai Nguyen Province. Poor farmers responded enthusiastically to these support measures and there was a growing forest movement. However, many of the farmers complained that ‘they are obliged to plant and take care of trees after receiving rice and subsidies from the State, but revenue from forestry production is too low’. This view was encountered by the author in talks with farmers in Dai Tu district in 2002.

Controls over Trade in Forest Products

In 1993, a new wood export-import policy was promulgated to reduce the area of logging and increase the forest area, strictly forbidding export of wood and wood products (such as round timber, sawn timber, flooring and rattan) and even the re-export of wood products and raw rattan (CT 462/TTG, 1993).[2] In 1997, stricter controls were introduced over the export of wood and wooden products, excluding handicraft products. Also, the government strongly encouraged wood imports and use of non-wood materials in production and consumption. Quotas were applied on all forms of wood for export (CT 286/TTG,1997).

The Reforestation Barren Hill Program (Program 327)

The primary purposes of Program 327 were replanting forests, protecting the remaining natural forest, growing fruit trees and long-term industrial trees, building up infrastructure and encouraging farmers to settle at fixed sites. The total capital for investment in this program was 2,987 billion VN$[3] (about US$206 M). Under this program, the area covered by forests increased to 10.9 M ha in 1999 and 11.4 M ha in 2001.

Over time, the focus of this program was changed and was finally on planting and protecting special-use as well as protected forest. Although the forest area increased,

[2] This is the decision (CT) of the Prime Minister (TTG) no. 462, in 1993.
[3] US$ 1 = 14,500 VN$ in 2000 and 15,500 VN$ in 2003.

other targets such as increasing the production forest area and settlement of farmers in the mountainous regions were not reached. Rather, the production forest area decreased and farmers continued their nomadic farming and living. There were many reasons for the limited achievements of Program 327, reported by World Bank (1998) and ICD of MARD (2001), including:

- there was no proper assessment of the adequacy of the wood markets to assure timber products could be sold at appropriate prices;
- to meet short-term demand of food, many households in mountainous regions exploited their plantation forests early without considering the growth cycle of trees, or grazed cattle freely on forest land or planted industrial trees such as coffee, tea and fruit trees rather than timber trees;
- there was a lack of participation of local inhabitants in suggesting targets for the program, resulting in a ‘top down’ approach that failed to gain commitment to forestry by local communities;
- the process of transferring land-use rights to farmers was slow, particularly in mountainous and remote areas;
- targets of programs and forest policies continually changed over time; and
- insufficient investment capital was available for many forestry projects, and consequently targets could not be reached.

The Five Million Hectare Program

To avoid the negative points of Program 327 and increase the rate of reforestation, the Five Million Hectare program was introduced in 1998. The Program aims at planting 2 M ha of protection forests and 3 M ha of production forests. This program has three main purposes (ICARD 2003):

- increasing the proportion of forest area nationally to 43%, assuring environmental security for soil and water, as well as preserving biodiversity;
- satisfying domestic demand for firewood, providing materials for paper production and artificial board production, gradually increasing the timber quantity available for export, promoting forestry to be an important sector in the national economy, and facilitating socio-economic progress in mountainous areas; and
- creating 2 M more permanent jobs, increasing the incomes of people living in forests, helping them eliminate hunger and reduce poverty, and stabilising politics, society, security and national defence, especially in the mountainous and border areas.

In the 5MH forest program, many measures have been introduced to overcome mistakes of Program 327, such as increasing farmers’ roles, accelerating the process of transferring land-use rights to farmers, and increasing the availability of investment capital. However, many unsolved problems remain. For example, the identification of land types and land areas where plantations can be grown has not been performed adequately, insufficient research has been undertaken to identify timber markets for such a huge amount of wood, and the protection cost will be very high if benefits of forest owners cannot be realised in both the short and long term.

PROFITABILITY OF STATE-OWNED AND HOUSEHOLD PLANTATION FORESTRY

In 1999, the total plantation area in Vietnam was 1.45 M ha and the natural forest area was 8.45 M ha (Table 3). Two important categories in forest management are State-owned plantation forest and household forests. Within the natural forest area, State-owned forest and household forests accounted for 32.9% and 15.1% of the total area, respectively. Within the plantation forest area, the proportions were 32.4% and 39.3% respectively. However, the rate of unassigned forest area was 29.3% of natural forest and 12.5% of plantation forest.

Table 3. Area of plantation and native forest by management organisation in Vietnam, 1999

Managing organisation	Natural forest (M ha)	Plantation forest (M ha)
State owned enterprise	3.11	0.47
Board of protection forest	0.88	0.14
Board of special used forest	1.08	0.05
Joint-venture enterprises	0.01	0.01
Households and individuals	1.43	0.57
Army force	0.17	0.03
Unassigned forest	1.77	0.18
Total area	8.45	1.45

Source: ICARD (2002).

The main purpose of farmers participating in forestry was to harvest and sell products for profit. However, forest growers have been facing low timber prices, high labour input and low profitability (at approximately 200,000 VN$/ha/year). The revenue generated from household forests is low relative to that from cropping. The revenue from wood products is highest for land holdings greater than 3 ha (of VN$1.439 M), accounting for 10% of total revenue from forestry nationally. The revenue from medium sized (1-3 ha) and small sized holdings (less than 1 ha) were VN$0.291 M (2.68%) and VN$0.560 M (4%) respectively. In general, the proportion of income from timber products has remained low compared to other income sources.

Production of rice, other crops, livestock and tea are the main income sources of farm households. Many farmers have converted most of their forest area to tea production because the wood price is relatively low. As indicated in Table 4, revenue from tea for large, medium and small holdings accounted for 69.8%, 62.5% and 53.8% respectively of total income in the 2002 ICARD survey. Income is also obtained from hiring out labour, but job opportunities are unstable and seasonal. Production of fruit trees provides a long-term harvest but fluctuating prices.

Table 4. Non-timber revenue sources of rural households in Dai Tu District, Thai Nguyen Province, 2001

Income source	Landholding greater than 3 ha		Landholding 1-3 ha		Landholding less than 1 ha	
	Revenue (VN$1000)	Ratio (%)	Revenue (VN$1000)	Ratio (%)	Revenue (VN$1000)	Ratio (%)
Fruit trees	291.7	2.0	296.3	2.1	196.4	1.8
Food tree	83.3	0.6	167.5	1.2	43.5	0.4
Tea	10044.4	69.8	8702.5	62.5	5831.9	53.8
Livestock	1705.6	11.9	1575.0	11.3	1176.4	10.8
Others	22.2	0.2	100.0	0.7	87.0	0.8
Retiring pension	413.9	2.9	620.0	4.5	1126.5	10.4
Working for coalmines	0.0	0.0	180.0	1.3	0.0	0.0
Working for coal companies	5.6	0.0	12.5	0.1	87.0	0.8
Working for others	250.0	1.7	330.0	2.4	255.8	2.4
Other resources	127.8	0.9	1380.0	9.9	1750.4	16.1
Total	14383.3	100.0	13923.9	100.0	10846.2	100.0

Source: ICARD (2002).

The financial returns from forestry are not sufficiently high for landholders to wish to expand their production forest area. Little fertiliser is used, and the labour input is mostly from family members. According to ICARD's survey in Phu Tho Province in 2001, average investment in eucalypt plantations for paper materials over an eight-year period (1994-2001) was only VN$2.2 M/ha (excluding family labour), or VN$250,000/ha/year.

Low investment has led to low productivity and long tree rotations. It was found in the survey at Phu Tho Province in 2000 that the eucalypt final yield over seven years growth was only 15 m^3/ha. Forestry experts estimated that the annual growth rate of naturally occurring production forests and special-use forests in Vietnam was only 0.9 m^3/ha/year, about 3 m^3/ha/year lower than the potential productivity. Therefore, forest growing is not generating high financial returns.

The increase of the plantation forest estate since the early of 1990s has mainly arisen from strict policies of government such as restrictions on tropical forest exploitation, promoting investment in forest growing, giving a rice allowance for timber growers and assigning crop land and forest land, rather than policies aimed at increasing the returns of forest growers. As a result, the rate of expansion in forest area has been erratic. Many households, especially those in remote areas, have switched from forestry to other crop types. A steady increase in plantation area can only be expected when government policies fostering plantation development are established and when financial profitability of production forestry is assured.

TIMBER MARKETS AND STAKEHOLDERS IN THE SUPPLY CHAIN

Before 1986, marketing and price setting in the forestry sector was controlled by the State. The State estimated the demand and planned the delivery. Only State enterprises have had an official license to exploit forests. Timber processing was controlled by the Ministry of Forestry and Ministry of Industry. Wholesale distribution operated under the management of the Ministry of Forestry, and scheduled prices were observed. Retail distribution operated under the management of Ministry of Trade. The State also played a monopoly role in timber exports, especially to the former Soviet Union.

In the period from 1990 to 1992, Vietnam shifted State-owned enterprises from a mechanism of subsidiary management to the market mechanism. The State has continued to be responsible for the regulation of timber harvesting every year. At present, many stakeholders take part in the production, selling and distribution of wood products. The main stakeholder groups are discussed below.

Wood Processing Firms

The wood and forestry processing industry has developed to a nation-wide network. Many sectors and economic agents take part in timber harvesting, diversifying the potential strong points of the industry. There are more than 1200 enterprises, with total capacity of 2 M m^3 of wood/year, among which State-owned enterprises comprise 41%, 56% belong to non-State-owned enterprises, and foreign direct investment enterprises control 3%. This is one of the scarce commodities opened widely by the consumption market, but many difficulties still exist, especially the shortage of timber. Vietnam Forest Products Corporation is the State-owned company operating in this sector.

Several handicraft items such as rattan and bamboo are being produced in small quantities, mainly concentrated on traditional handicraft villages in rural areas and neighbouring to cities. These firms take advantage of under-utilised labour, but do not produce strategic products for export.

Wood processing firms with low capacity and antiquated technology have both wasted wood materials and incurred high production costs. Managers are not prepared to risk further investment, to update technology and diversify products. This situation leads to waste of wood material, and the supply of wood products cannot satisfy the consumption demand or keep up with market changes. Enterprises working under the *Enterprise Law* and *Foreign Direct Investment Law* are more successful than State-owned companies but still lack competitiveness, especially in international markets.

A small number of enterprises with high capacity have adopted new technology. Bai Bang Paper Co (Phu Tho Province) is an example. In 1990, 39,000 tons of paper were produced, increasing by 1999 to 63,100 tons, 8,100 tons more than the design capacity, and accounting for 40% of paper production in Vietnam. Plant capacity was further expanded to 100,000 tons in 2001 and 200,000 tons in 2003. Bai Bang's paper production capacity is now much higher than comparable paper production plants in China (6000 factories with individual annual capacity ranging over about 2000 tons to 20,000 tons) (ICARD 2001).

The demand for logs from farmers has been low due to small size of processing firms. Wood production can be expected to increase in coming years, facilitated by

new government policies to increase plantation areas. Therefore, there is a need for wood processing firms to increase their capacity to purchase more wood from smallholders as well as increase their competitiveness in terms of production costs, particularly when Vietnam becomes an official member of the World Trade Organisation.

Carpentry Firms

There are thousands of carpentry firms throughout Vietnam, concentrated mainly in the northern provinces. These firms supply timber for construction, furniture and other commodities for rural people. According to unofficial estimates of MARD, there are approximately 1500 to 1800 firms, with capacities between 15 m^3/year and 200 m^3/year, which mainly serve domestic demand.

The demand for acacia and eucalypt timber species by carpentry firms is not large since these species are not considered well suited to producing timber furniture, especially high-quality furniture. Even high-quality acacia and eucalypt timber can only be used to produce low-quality products or minor parts of high-quality items such as beds, students' desks and chairs, or wooden frame bending eaves. According to ICARD's survey in Dai Tu District, the volume of acacia and eucalypt timber assembled by carpentry firms has remained low, at less than 1% of total wood product output in the surveyed district.

Large Enterprises and Licensed Individuals

Large enterprises and licensed individuals are two important categories in the market chain. According to the ICARD survey, Viet Nam Paper Corporation annually allocates purchase quotas to various organisations and individuals such as Phu Tho General Trade Company and Phu Tho 2 General Trade Company, through license forms. Dai Tu and Bach Thong State forestry farms were issued with certificates to collect hardwood for Lang Cam coal mine. In addition, certificates have been issued to some individuals, for smaller timber quantities. Based on the specific quota, farms and individuals harvest their own timber, as well as assembling timber from other growers and making purchases from private timber assembling firms.

Private Assemblers

At the two ICARD survey sites (Phu Tho province and Dai Tu district of Thai Nguyen province), the managers of firms were found to be highly experienced people having close relationships with final buyers such as Lang Cam coal mine and Bai Bang Paper Factory, as well as certificated assemblers of timber from farms and individuals. These managers were able to purchase wood from farmers and then sell on to organisations or individuals who have purchase licenses, or to private timber-using firms.

Middlemen

Wooden products from farmers transit via private collection units to licensed purchasing organisations and individuals, then to wood processing factories and timber mills. Price levels and shares of resource rents at some stages in the supply chain are inequitable, and discourage growers while providing benefits to middlemen. Government policies such as the Paper Protection Policy – imposing a high import tax of 60% – also favour high timber prices. Also, the timber price paid

by Bai Bang paper factory is higher than in neighbouring countries, at VN$420,000/ton. However, the farm-gate price is very low because of the high markup by middlemen. Only a small number of farmers can sell directly to the paper factory because they do not have suitable means to transport timber and because the volume they produce is small. According ICARD's survey, the farm-gate price is only one third of the price at Bai Bang Paper Factory in Phu Tho province and one half of that at the Lang Cam coal mine.

TIMBER EXPORTS FROM VIETNAM

The export of forest products has developed encouragingly in recent years. Timber export turnover declined from the beginning of the 1990s, when the government promulgated the '*Close the forest gate*' policy to restrict over-exploitation of native forests. However, since 1996, timber exports have recovered quickly and shown excellent growth, of 10-15% per year. Timber export turnover reached US$212 M in 1996, US$290 M in 2000 and over US$300 M in 2001. The main exported products are processed, some of which are in high demand and are competitive in price. Export products and destinations include:

- furniture products to Europe;
- sawn products to Russia and eastern Europe;
- plywood, handicrafts and raw material products to Japan, Taiwan, South Korea and Hong Kong;
- bamboo to Europe, Japan, Taiwan and Hong Kong; and
- special forest products to Japan, China and other Asian countries.

Many potential forestry products have not yet been exploited and there is potential for further increases in export turnover. Handicraft products are an important component of exports. In 1997, wood and rattan products accounted for US$90 M out of a total of export turnover of US$120 M. But in general, wood products from Vietnam lack price competitiveness. For example, the total production cost for artificial wood board in Vietnam has been estimated at VN$2.218 M/$m^3$ compared with only VN$1.430 M/$m^3$ in Malaysia (Table 5).

Two important export markets for Vietnam are the European Union and USA. America can be expected to become an increasingly important market for Vietnam forestry due to the Vietnam – America Bilateral Trade Agreement in 2000. In 1999, the gross import value of commodities made from wood to the USA from all source countries was US$20.4 billion. Among these imports, wood and rattan import turnover was US$5.5 billion, and wood frame chairs US$4.9 billion. In these totals, the value of imports from Vietnam was relatively small, at about US$4 M, including timber products, rattan and bamboo of about US$2.9 M. This low rate has been due to a high import tax rate (of 40-69%) imposed by the US government on forest products from Vietnam. In contrast, countries with Most Favoured Nation status face a zero US import tariff for forest products

Table 5. Cost for artificial wood board in Vietnam and Malaysia

Item	Production cost in Vietnam (VN$/m^3)	Production cost in Malaysia (VN$/m^3)
Wood material	595,000	400,000
Glue	602,800	450,000
Electricity	272,700	170,000
Accessories	65,132	65,132
Salary	52,364	52,364
Sub-material	72,636	30,000
Depreciation	282,521	150,000
Management fee	113,539	113,539
Loan interest	160,661	0
Total	2,217,535	1,430,000

Source: ICARD (2003).

CONCLUSION

In rural Vietnam, the labour force is increasing rapidly, while few jobs are being created in urban areas, imposing barriers for increases in per capita rural incomes. The overall value of Vietnam’s cropping, forestry, livestock and aquaculture is increasing; however, the relative contribution of the forestry sector is declining. Forestry development is considered as an important solution to eliminate hunger and reduce poverty, as well as to create jobs and increase income for the one third of the population of Vietnam who live in forested areas.

Forestry growth and shifting the economic structure of agriculture in favour of an increased forestry contribution is one of the priority policy targets in Vietnam. Great efforts have been made to eliminate hunger and reduce poverty, creating more jobs and increasing income for people living in forest areas. However, forestry development in recent years has not satisfied that target. The forest area has been growing again since the early 1990s. The main reason is the strong impact of government policies such as restricting the exploitation of native forests and promoting an increase in plantation area, rather than policies to improve profit of forest growers. The low profitability of plantation forestry discourages farmers from increasing their plantation area. Many households have switched from timber production to growing other trees or plants, and a consistent increase in plantation area over time has failed to materialise. However, the demand for timber will continue to grow in Vietnam, while the supply from native forests will be restricted, creating an urgent need for establishment of more plantation forestry.

The low farmgate price of wood is the main reason for low profitability and the lack of incentive for smallholders to plant and manage forests. The low capacity and small size of wood processing enterprises and carpentry firms leads to low demand for farm-grown timber. At the same time, government programs and policies from the early 1990s have been increasing the volume of wood supply. The imbalance between supply and demand leads to over-supply, reducing the farmgate price.

Another reason for low timber prices is high transaction costs and high margins procured by middlemen.

Forestry exports from Vietnam have increased since the mid 1990s, but mainly based on the export of traditional handicrafts. Advanced technology products are only a small component of exports, because most Vietnamese enterprises are small in size, utilise low technology and lack competitiveness. Increasing the competitiveness of wood processing enterprises is an important priority to improve export turnover, especially when Vietnam becomes an official member of World Trade Organisation.

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